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Project:	P10471 - MIL05
Document:	Electrical Load Assessment
Sheet:	Building Load Profile
Revision:	For Information
Date:	20/08/2024
Author:	RZS

Lombardini22
DESIGN THINKING

Black&White

48MW IT Load Profile - 8 Data Halls

	Per Unit Load			Load w/ Losses			
	kW	Qty per DH	Total QTY	kW	pf	kVA	A
IT PCS - Critical IT & Aux							
Site IT Load				48000.00	0.99	48484.85	69981.85
Total UPS losses				*2000.00*	*0.99*	*2020.20*	*2915.91*
Total 2MW UPS charging	*100*	*3*	*24*	*2400.00*	*0.99*	*2424.24*	*3499.09*
IT Power Module Aux	12	3	24	292.80	0.90	325.33	469.58
IT Power Module CRAH (4nos.)	8	3	24	201.60	0.85	237.18	342.33
IT Gen Aux	15	3	24	360.00	0.90	400.00	577.35
IT PCS - Critical Mech & Aux							
DH with IDF FWU 2-DH	22	14	28	616.00	0.90	684.44	987.91
IDF CRAH 2-DH	6	2	4	24.00	0.90	26.67	38.49
DH without IDF FWU 6-DH	20	16	96	1920.00	0.90	2133.33	3079.20
Chilled Water Pump	25		40	1000.00	0.90	1111.11	1603.75
ACC Controller	5		40	200.00	0.90	222.22	320.75
Critical DB load provision (12nos. In MIL05, +3 for allowance) secondary to house UPS, load already considered in the house			15	0.00	0.90	0.00	0.00
Total UPS losses				*156.67*	*0.99*	*158.25*	*228.41*
Total UPS charging	*15*	*3*	*24*	*360.00*	*0.99*	*363.64*	*524.86*
IT PCS Tx losses	*19*	*3*	*24*	*456.00*	*1.00*	*456.00*	*658.18*
RCS - Aux							
IT Power Module Aux	12		4	48.80	0.90	54.22	78.26
IT Power Module CRAH (4nos.)	8		4	33.60	0.85	39.53	57.06
IT Gen Aux	15		4	60.00	0.90	66.67	96.23
RCS - Critical Mech & Aux							
Critical DB load provision (12nos. In MIL05, +3 for allowance)	25		8	200.00	0.90	222.22	320.75
Total UPS losses				*8.33*	*0.99*	*8.42*	*12.15*
Total UPS charging	*15*		*4*	*60.00*	*0.99*	*60.61*	*87.48*
IT RCS Tx losses	*0.04*		*4*	*0.18*	*1.00*	*0.18*	*0.25*

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	Per Unit Load			Load w/ Losses			
	kW	Qty per DH	Total QTY	kW	pf	kVA	A
PMS - Critical Mech & Aux							
IT Power Module Aux	10		10	100.00	0.90	111.11	160.38
IT Power Module CRAH (2nos.)	3		10	28.00	0.85	32.94	47.55
IT Gen Aux	15		10	150.00	0.90	166.67	240.56
Air Cooled Chiller Normal - 370kW High Temp Intake - 425KW	370.00		40	14800.00	0.95	15578.95	22486.27
House Load	25		8	200.00	0.95	210.53	303.87
PMS Tx losses	*7*		*10*	*73.04*	*1.00*	*73.04*	*105.42*
ABS							
ABS				880.95		938.07	1353.99
ABS Tx losses	*7*		*1*	*7.00*	*1.00*	*7.00*	*10.10*
System Losses							
1% of the total load				746.30	0.95	785.58	
				kW	**pf**	**kVA**	
Total				**75383.26**	**0.98**	**77111.59**	
Total (No charging load)				**72623.26**	**0.98**	**74330.91**	
PUE peak				**1.51**			